

SEQUENCE LISTING

<110> Joo Young Chung
Sang Kyu Park
Sang Myoung Ju
Hyea Kyung Ahn
Seung Wook Lim
Woo Ik Chang
Seung Kook Park
Yeo Wook Koh
Ji Soo Park

<120> A NOVEL HUMAN THROMBOPOIETIN MUTEIN

<130> G&C 118.7-US-WO

<140> To be assigned

<141> 1999-06-30

<150> KR 1998-25935

<151> 1998-06-30

<150> KR 1999-25143

<151> 1999-06-29

<150> PCT/KR99/00347

<151> 1999-06-30

<160> 34

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> BglII-tagged primer corresponding to the N
terminal sequence of hTPO protein

<400> 1

gaagatctat ggagctgact gaa

23

<210> 2

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> EcoRI-tagged primer corresponding to the C
terminal sequence of hTPO protein

<400> 2

atgaattctc acccttcctg agac

24

<210> 3
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligodeoxynucleotide primer 29-N

<400> 3
gctgtggtgt tgccctgtgg 20

<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligodeoxynucleotide primer 29-C

<400> 4
acagggaac accacagctc 20

<210> 5
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligodeoxynucleotide primer 30-N

<400> 5
gggttcggtt taaactctgc ag 22

<210> 6
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligodeoxynucleotide primer 30-C

<400> 6
ctgcagagtt taaacggaac ccag 24

<210> 7
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> primer 31-N

<400> 7

agagggtgga attccctaca agca

24

<210> 8

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 31-C

<400> 8

tgctttagg gaattccacc ctct

24

<210> 9

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 32-N

<400> 9

gggcccgggtt gacgcaga

18

<210> 10

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 32-C

<400> 10

tctgctcaa ccgggccc

18

<210> 11

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 33-N

<400> 11
ggactagaga cgtgttgctg gggac

25

<210> 12
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 33-C

<400> 12
gtccccagca acacgtctct agtcc

25

<210> 13
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 34-N

<400> 13
gaagcccaga tccgttagtt ctggc

25

<210> 14
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 34-C

<400> 14
gccagaacta acggatctgg gcttc

25

<210> 15
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 58-N

<400> 15
agctgtggtg tttggggccc gc

22

<210> 16

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 58-C

<400> 16
gcgggccccca aacaccacag ct

22

<210> 17
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 59-N

<400> 17
ctagagaggt gctgttgaca gctgtg

26

<210> 18
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 59-C

<400> 18
cacagctgtc aacagcagca cctctctag

29

<210> 19
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> primer 60-N

<400> 19
ggtgggtggg gtccggttga cgcagagg

28

<210> 20
<211> 28
<212> DNA
<213> Artificial Sequence

<220>

<223> primer 60-C

<400> 20

cctctgcgtc aaccggaccc caccaccc

28

<210> 21

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 61-N

<400> 21

tctgctgggg gaagcgttgg tgggtgg

27

<210> 22

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 61-C

<400> 22

ccaccaccca acgcttcccc cagcaga

27

<210> 23

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 62-N

<400> 23

cagtgtgagg gttagattgg ttctgctg

28

<210> 24

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 62-C

<400> 24

cagcagaacc aatctaaccc tcacactg

28

<210> 25

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 63-N

<400> 25

cagtgtgagg tttagagagg tt

22

<210> 26

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 63-C

<400> 26

aacctctcta aacctcacac tg

22

<210> 27

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligodeoxynucleotide 1 of BamHI linker

<400> 27

cgcgatccg catg

14

<210> 28

<211> 10

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligodeoxynucleotide 1 of BamHI linker

<400> 28

cggatccg

10

<210> 29

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> KpnI-tagged primer corresponding to the N terminal
sequence of hTPO protein

<400> 29

ggggtaccgc caccatggag ctgactgaat tg

32

<210> 30

<211> 332

<212> PRT

<213> Homo sapiens

<400> 30

Ser	Pro	Ala	Pro	Pro	Ala	Cys	Asp	Leu	Arg	Val	Leu	Ser	Lys	Leu	Leu
1				5				10					15		
Arg	Asp	Ser	His	Val	Leu	His	Ser	Arg	Leu	Ser	Gln	Cys	Pro	Glu	Val
			20					25				30			
His	Pro	Leu	Pro	Thr	Pro	Val	Leu	Leu	Pro	Ala	Val	Asp	Phe	Ser	Leu
		35					40					45			
Gly	Glu	Trp	Lys	Thr	Gln	Met	Glu	Glu	Thr	Lys	Ala	Gln	Asp	Ile	Leu
	50					55					60				
Gly	Ala	Val	Thr	Leu	Leu	Glu	Gly	Val	Met	Ala	Ala	Arg	Gly	Gln	
65				70				75						80	
Leu	Gly	Pro	Thr	Cys	Leu	Ser	Ser	Leu	Leu	Gly	Gln	Leu	Ser	Gly	Gln
				85				90				95			
Val	Arg	Leu	Leu	Leu	Gly	Ala	Leu	Gln	Ser	Leu	Leu	Gly	Thr	Gln	Leu
		100					105					110			
Pro	Pro	Gln	Gly	Arg	Thr	Thr	Ala	His	Lys	Asp	Pro	Asn	Ala	Ile	Phe
		115					120					125			
Leu	Ser	Phe	Gln	His	Leu	Leu	Arg	Gly	Lys	Val	Arg	Phe	Leu	Met	Leu
	130					135					140				
Val	Gly	Gly	Ser	Thr	Leu	Cys	Val	Arg	Arg	Ala	Pro	Pro	Thr	Thr	Ala
145					150					155					160
Val	Pro	Ser	Arg	Thr	Ser	Leu	Val	Leu	Thr	Leu	Asn	Glu	Leu	Pro	Asn
				165				170						175	
Arg	Thr	Ser	Gly	Leu	Leu	Glu	Thr	Asn	Phe	Thr	Ala	Ser	Ala	Arg	Thr
		180						185					190		
Thr	Gly	Ser	Gly	Leu	Leu	Lys	Trp	Gln	Gln	Gly	Phe	Arg	Ala	Lys	Ile
	195						200					205			
Pro	Gly	Leu	Leu	Asn	Gln	Thr	Ser	Arg	Ser	Leu	Asp	Gln	Ile	Pro	Gly
	210				215						220				
Tyr	Leu	Asn	Arg	Ile	His	Glu	Leu	Leu	Asn	Gly	Thr	Arg	Gly	Leu	Phe
225					230					235					240
Pro	Gly	Pro	Ser	Arg	Thr	Leu	Gly	Ala	Pro	Asp	Ile	Ser	Ser	Gly	
				245				250				255			
Thr	Ser	Asp	Thr	Gly	Ser	Leu	Pro	Pro	Asn	Leu	Gln	Pro	Gly	Tyr	Ser
		260						265					270		
Pro	Ser	Pro	Thr	His	Pro	Pro	Thr	Gly	Gln	Tyr	Thr	Leu	Phe	Pro	Leu
		275					280					285			
Pro	Pro	Thr	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	His	Pro	Leu	Leu	Pro
	290					295					300				
Asp	Pro	Ser	Ala	Pro	Thr	Pro	Thr	Pro	Thr	Ser	Pro	Leu	Leu	Asn	Thr
305					310					315					320

Ser Tyr Thr His Ser Gln Asn Leu Ser Gln Glu Gly
 325 330

<210> 31
 <211> 996
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> cDNA sequence encoding hTPO mutein 40433

<400> 31
 agcccggctc ctctgcttg tgacctccga gtcctcagta aactgcttcg tgactcccat 60
 gtccttcaca gcagactgag ccagtgccca gaggttcacc ctttgccctac acctgtcctg 120
 ctgcctgctg tggacttttag cttgggagaa tggaaaaccc agatggagga gaccaaggca 180
 caggacattc tgggagcagt gaccttctg ctggagggag tgatggcagc acggggacaa 240
 ctgggaccca cttgcctctc atccctcctg gggcagcttt ctggacaggt ccgtctcctc 300
 cttggggccc tgcagagcct ccttggaacc cagcttcctc cacagggcag gaccacagct 360
 cacaaggatc ccaatgccat cttcctgagc ttccaacacc tgctccgagg aaaggtgcgt 420
 ttcttgatgc ttgtaggagg gtccaccctc tgcgtcaggc gggccccacc caccacagct 480
 gtccccagca acacgtctct agtcctcaca ctgaacgagc tcccaaacag gacttctgga 540
 ttgttggaga caaacttcac tgcctcagcc agaactactg gctctgggct tctgaagtgg 600
 cagcagggat tcagagccaa gattcctggt ctgctgaacc aaacctccag gtccctggac 660
 caaatccccg gatacctgaa caggatacac gaactcttga atggaactcg tggactcttt 720
 cctggaccct cacgcaggac cctaggagcc ccggacattt cctcaggaac atcagacaca 780
 ggctccctgc cacccaacct ccagcctgga tattctcctt ccccaaccca tctctctact 840
 ggacagtata cgtcttctcc tcttccaccc accttgccca cccctgtggt ccagctccac 900
 cccctgcttc ctgaccttcc tgcctcaacg cccaccctta ccagccctct tctaaacaca 960
 tcttacaccc actcccagaa tctgtctcag gaaggg 996

<210> 32
 <211> 996
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> cDNA sequence encoding hTPO mutein 40434

<400> 32
 agcccggctc ctctgcttg tgacctccga gtcctcagta aactgcttcg tgactcccat 60
 gtccttcaca gcagactgag ccagtgccca gaggttcacc ctttgccctac acctgtcctg 120
 ctgcctgctg tggacttttag cttgggagaa tggaaaaccc agatggagga gaccaaggca 180
 caggacattc tgggagcagt gaccttctg ctggagggag tgatggcagc acggggacaa 240
 ctgggaccca cttgcctctc atccctcctg gggcagcttt ctggacaggt ccgtctcctc 300
 cttggggccc tgcagagcct ccttggaacc cagcttcctc cacagggcag gaccacagct 360
 cacaaggatc ccaatgccat cttcctgagc ttccaacacc tgctccgagg aaaggtgcgt 420
 ttcttgatgc ttgtaggagg gtccaccctc tgcgtcaggc gggccccacc caccacagct 480
 gtccccagca gaacctctct agtcctcaca ctgaacgagc tcccaaacag gacttctgga 540
 ttgttggaga caaacttcac tgcctcagcc agaactaacg gatctgggct tctgaagtgg 600
 cagcagggat tcagagccaa gattcctggt ctgctgaacc aaacctccag gtccctggac 660
 caaatccccg gatacctgaa caggatacac gaactcttga atggaactcg tggactcttt 720
 cctggaccct cacgcaggac cctaggagcc ccggacattt cctcaggaac atcagacaca 780
 ggctccctgc cacccaacct ccagcctgga tattctcctt ccccaaccca tctctctact 840

ggacagtata	cgctcttccc	tcttccaccc	accttgccca	cccctgtggt	ccagctccac	900
cccctgcttc	ctgacccttc	tgtctcaacg	cccacccta	ccagccctct	tctaaacaca	960
tcctacaccc	actcccagaa	tctgtctcag	gaaggg			996

<210> 33
 <211> 996
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> cDNA sequence encoding hTPO mutein 40449

<400> 33						
agcccggctc	ctcctgcttg	tgacctccga	gtcctcagta	aactgcttcg	tgactcccat	60
gtccttcaca	gcagactgag	ccagtgccca	gaggttcacc	ctttgcctac	acctgtcctg	120
ctgcctgctg	tggacttttag	cttggggagaa	tggaaaaccc	agatggagga	gaccaaggca	180
caggacattc	tgaggagcagt	gaccttctg	ctggagggag	tgatggcagc	acggggacaa	240
ctgggaccca	cttgcctctc	atccctcctg	gggcagcttt	ctggacaggt	ccgtctcctc	300
cttggggccc	tgcagagttt	aaacggaacc	cagcttcctc	cacagggcaa	caccacagct	360
cacaaggatc	ccaatgccat	cttcctgagc	ttccaacacc	tgctccgagg	aaaggtgcgt	420
ttcctgatgc	ttgtaggagg	gtccaccctc	tgcgtcaggc	gggccccacc	caccacagct	480
gtccccagca	acacgtctct	agtcttcaca	ctgaacgagc	tcccaaacag	gacttctgga	540
ttgttggaga	caaacttcac	tgctcagcc	agaactactg	gctctgggct	tctgaagtgg	600
cagcagggat	tcagagccaa	gattcctggt	ctgctgaacc	aaacctccag	gtccctggac	660
caaatccccg	gatacctgaa	caggatacac	gaactcttga	atggaactcg	tggactcttt	720
cctggaccct	cacgcaggac	cctaggagcc	ccggacattt	cctcaggaac	atcagacaca	780
ggctccctgc	cacccaacct	ccagctggga	tattctcctt	ccccaacca	tcctcctact	840
ggacagtata	cgctcttccc	tcttccaccc	accttgccca	cccctgtggt	ccagctccac	900
cccctgcttc	ctgacccttc	tgtctcaacg	cccacccta	ccagccctct	tctaaacaca	960
tcctacaccc	actcccagaa	tctgtctcag	gaaggg			996

<210> 34
 <211> 996
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> cDNA sequence encoding hTPO mutein 40458

<400> 34						
agcccggctc	ctcctgcttg	tgacctccga	gtcctcagta	aactgcttcg	tgactcccat	60
gtccttcaca	gcagactgag	ccagtgccca	gaggttcacc	ctttgcctac	acctgtcctg	120
ctgcctgctg	tggacttttag	cttggggagaa	tggaaaaccc	agatggagga	gaccaaggca	180
caggacattc	tgaggagcagt	gaccttctg	ctggagggag	tgatggcagc	acggggacaa	240
ctgggaccca	cttgcctctc	atccctcctg	gggcagcttt	ctggacaggt	ccgtctcctc	300
cttggggccc	tgcagagcct	ccttgggaacc	cagcttcctc	cacagggcag	gaccacagct	360
cacaaggatc	ccaatgccat	cttcctgagc	ttccaacacc	tgctccgagg	aaaggtgcgt	420
ttcctgatgc	ttgtaggagg	gtccaccctc	tgcgtcaggc	gggccccaaa	caccacagct	480
gtccccagca	acacgtctct	agtcttcaca	ctgaacgagc	tcccaaacag	gacttctgga	540
ttgttggaga	caaacttcac	tgctcagcc	agaactactg	gctctgggct	tctgaagtgg	600
cagcagggat	tcagagccaa	gattcctggt	ctgctgaacc	aaacctccag	gtccctggac	660
caaatccccg	gatacctgaa	caggatacac	gaactcttga	atggaactcg	tggactcttt	720
cctggaccct	cacgcaggac	cctaggagcc	ccggacattt	cctcaggaac	atcagacaca	780

